Municipal Stakeholder Responses

September 2008

Antidegradation “Homework”

Assignment 1

Provide suggested edits to currently proposed applicability language of Section 1(b)

Assignment 1

Section 1(b): Except as provided under section 4 of this rule, the antidegradation implementation procedures established by this rule apply to a proposed new or increased loading of a pollutant of concern to a surface water of the state that requires *a new or modified NPDES permit*.

Why?

Assignment 1

1. Any trigger in the new rule must conform with the existing Great Lakes System rules:

POC	**HQWs**	**OSRWs**
Non-BCC	New or increased permit limit	
BCC	Deliberate action resulting in a non-domestic increase in loading	Deliberate action resulting in any increase in loading

Assignment 1

2. Municipalities have already stated that certain exemptions (Assignment 3) in section (4)(b) cannot require burdensome justification or public participation requirements because the exemptions listed below are already covered under the NPDES permit or other portions of the rules.

   Exemptions: (1), (2), (3), (5), and (8)

Assignment 2

Provide your suggested edits to the currently proposed definition of “pollutant of concern”.

Assignment 2

(45) “Pollutant of concern” means a pollutant that is reasonably expected to be present in a discharge based on the source and nature of the discharge.

Municipal representatives accept this definition. *However, we do not accept Form 2C. Instead we recommend the permit application form for municipal permits and current priority pollutant list*

Assignment 3

Complete the table to identify your interest group's position of the key policy issues related to the types of discharges or actions that may be "exempt" form an antidegradation demonstration

Assignment 3

§4(b)(1) Loading covered by permit

Justification?	NO*
Public Notice/Comment?	NO*/NO*
Simultaneous Guidance?	NO
Apply to BCCs?	YES

*Already covered by NPDES permit language and permitting process.

Assignment 3

§4(b)(2) Bypasses

Justification?	NO*
Public Notice/Comment?	NO*/NO*
Simultaneous Guidance?	NO
Apply to BCCs?	YES

*Already covered by NPDES permit terms and 327 IAC 2-2-8(11)

Assignment 3

§4(b)(3) New monitoring or limit

Justification?	NO*
Public Notice/Comment?	NO*/NO*
Simultaneous Guidance?	NO
Apply to BCCs?	YES

*Notice provided by permit

Assignment 3

§4(b)(4) Pollutant in intake water

Justification?	YES*
Public Notice/Comment?	NO**/NO**
Simultaneous Guidance?	NO
Apply to BCCs?	YES

*data required to demonstrate that POC is in the intake water

**Notice via permit process

Assignment 3

§4(b)(5) Control on wet weather flow or storm water

Justification?	NO*
Public Notice/Comment?	NO**/NO**
Simultaneous Guidance?	NO
Apply to BCCs?	YES

*Municipalities: NO, if within current service area;
**unless required elsewhere in the rules

Assignment 3

§4(b)(6) Short term and limited

Justification?	YES*
Public Notice/Comment?	YES*/NO**
Simultaneous Guidance?	NO
Apply to BCCs?	YES

*Unless it falls under §4(b)(1), (2) or (5)

** Unless required under other rules

Assignment 3

§4(b)(7) CERCLA/RCRA actions

Justification?	NO*
Public Notice/Comment?	NO**/NO**
Simultaneous Guidance?	NO
Apply to BCCs?	YES#

* if within existing approval process
**except as required by existing approval process
unless contradicted by other rules

Assignment 3

§4(b)(8) Increase in sewered area

Justification?	NO*
Public Notice/Comment?	NO**/NO**
Simultaneous Guidance?	NO
Apply to BCCs?	YES#

Change “customer” to “user”

* covered by existing rules, 327 IAC 3

** unless contradicted by other rules

BCCs from sources other than industrial should be acceptable; suggest using language of in current rules 327 IAC 5-2-11.3(b)(1)(C)(iii)(FF**)**

Assignment 3

§4(b)(9a) Simultaneous decrease of same pollutant from another outfall of same facility into same waterbody

Justification?	NO*
Public Notice/Comment?	NO*/NO*
Simultaneous Guidance?	NO
Apply to BCCs?	YES

*covered by permitting process

Assignment 3

§4(b)(9b) Simultaneous decrease of same pollutant from same or another facility in the watershed

Justification?	YES
Public Notice/Comment?	YES/YES
Simultaneous Guidance?	NO
Apply to BCCs?	YES

Assignment 3

§4(b)(10) Increase in pollutant “A” necessary to reduce more toxic pollutant “B”

Justification?	YES
Public Notice/Comment?	YES/YES
Simultaneous Guidance?	NO
Apply to BCCs?	YES

Assignment 3

§4(b)(11) Non-contact cooling water

Justification?	YES*
Public Notice/Comment?	YES*/YES*
Simultaneous Guidance?	NO
Apply to BCCs?	NO**

*ONLY within the existing process under rules

** there should be no BCCs, unless in intake water, then §4(b)(4) applies

Assignment 3

§4(b)(12) Approved water treatment additives

Justification?	NO*
Public Notice/Comment?	NO*/NO*
Simultaneous Guidance?	NO
Apply to BCCs?	NO**

*ONLY REQUIRED IF A NEW ADDITIVE PREVIOUSLY NOT APPROVED within existing process under the rules

** water additives with BCCs should not be approved unless §4(b)(10) applies

Assignment 3

§6(c)(4) Reduction of air pollutants

Justification?	YES*
Public Notice/Comment?	YES*/YES*
Simultaneous Guidance?	NO*
Apply to BCCs?	YES

*ONLY within existing process under the rules

Assignment 3

§6(c)(5) Increased sanitary wastewater to alleviate public health concern

Justification?	YES*
Public Notice/Comment?	NO/NO
Simultaneous Guidance?	NO
Apply to BCCs?	YES**

*Fast-tracked justification with reasons, including potential options, necessity, and agency sponsoring/requiring the new source

**Only from non-industrial sources

Assignment 4

Provide your suggested definition of “assimilative capacity”.

Assignment 4

The assimilative capacity is the difference between the applicable water quality criterion for a pollutant parameter and the ambient water quality for that parameter when it is better than the criterion.*

**Memorandum from Ephraim S. King, Dir. of EPA Office of Science and Technology, to Water division directors, Regions 1-10, August 10, 2005*

Assignment 4

- Applicable water criterion = X mg/l
- Ambient water quality = Y mg/l
- Assimilative capacity = X-Y mg/l
- X must be greater than Y to have assimilative capacity
- Mixing zones are not included in the definition of assimilative capacity

Assignment 5

Provide your suggested edits to the currently proposed de minimis language of Section 4(b)(13)

Assignment 5

Provide suggested edits to the currently proposed de minimis language of Section 4(b)(13)

(13)(A) For a HQW that is not an ONRW, OSRW or EUW, the following apply:

Change to…

(13)(A) For a HQW that is not an ONRW, OSRW or EUW, **or a HQW tributary to an OSRW or EUW,** the following apply:

Assignment 5

(13)(A)(i)(AA) The proposed increase in mass-based effluent limits is less than or equal to the water quality-based effluent limit (WQBEL) calculated using ten percent (10%) of the unused loading capacity, or the DTBEL, whichever is more stringent.

Change to…

(13)(A)(i)(AA) The proposed increase in mass-based effluent limits is less than or equal to the **sum of the** water quality-based effluent limit (WQBEL) **and** ten percent (10%) of the unused loading capacity, or the DTBEL, **expressed as mass**, **if the WQBEL cannot be calculated; and**

Assignment 5

(13)(A)(i)(BB) The unused loading capacity has not decreased by more that X percent (X%) above the benchmark set at the time of the initial antidegradation demonstration or de minimis evaluation in the area of the discharge.

Change to…

(13)(A)(i)(BB) The unused loading capacity has not decreased by more that **ninety percent (90%) of the** benchmark set at the time of the initial antidegradation demonstration or de minimis evaluation in the area of the discharge.

Assignment 5

(13)(A)(i) When the WQBEL calculated using ten percent (10%) of the unused loading capacity is greater than the WQBEL based on the FAV, the WQBEL based on the FAV shall be used as the De minimis Water Quality Based Effluent Limit.

Change to…

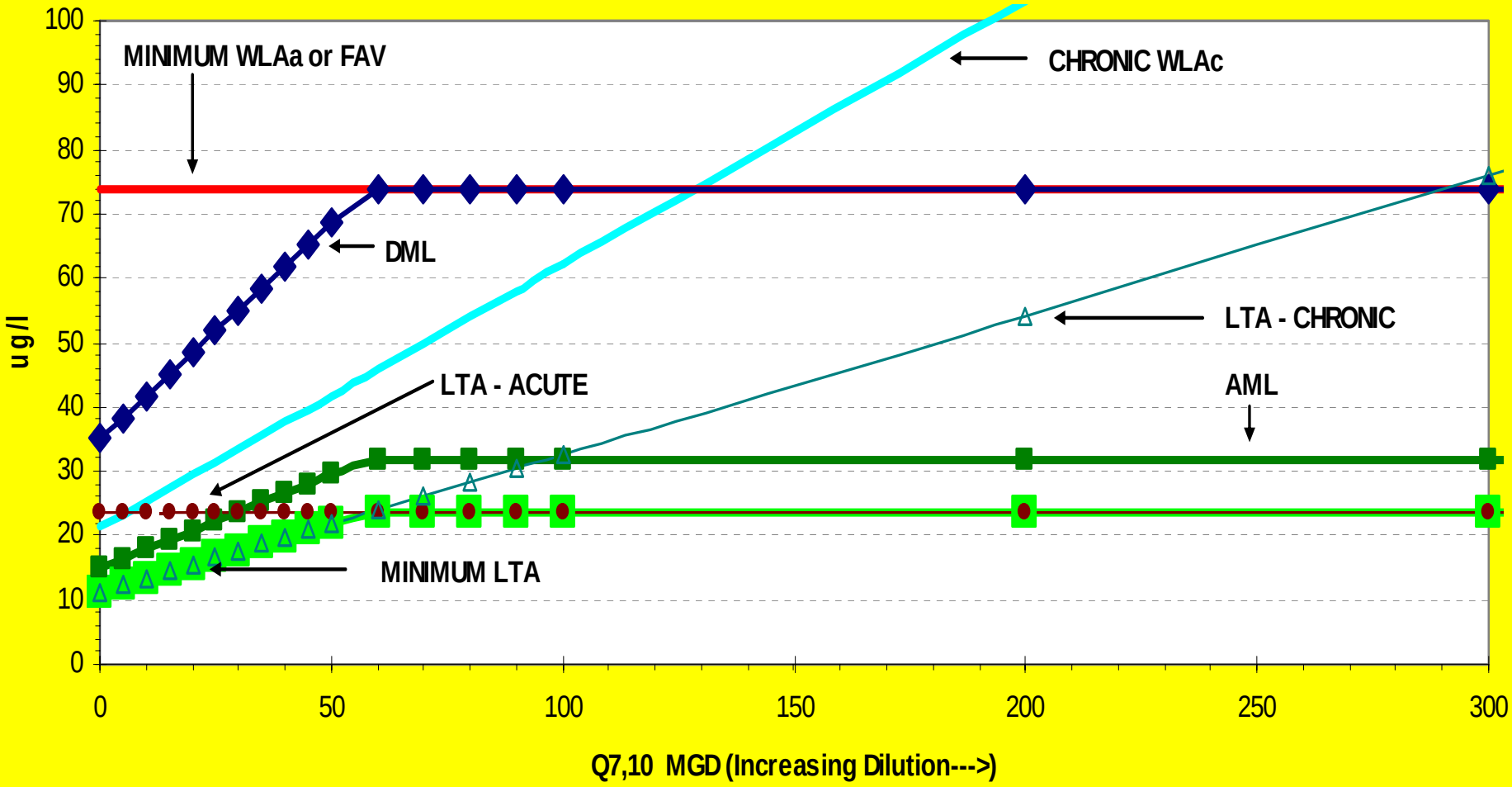
(13)(A)(i) **(CC)** When the WQBEL **plus** ten percent (10%) of the unused loading capacity is greater **than the FAV, expressed as mass, then the FAV shall be used as the limit for de minimis lowering of water quality.**

Assignment 5

- It can be shown mathematically, for a discharge to a receiving stream with appreciable flow, as the stream flow increases in relation to the discharge flow, FAV acts as a limit to both the Daily Maximum Limit (DML) and Average Monthly Limit (AML). The FAV limit takes over when two things are true:
  - the wasteload allocation based on the acute water quality standard is greater that the FAV (equals 2 x the acute WQS), AND
  - when the calculated chronic WQS-based long-term average is greater than the acute WQS-based long-term average.
- When the above is true, then long-term average (LTA) used to calculate WQBELs is the FAV.

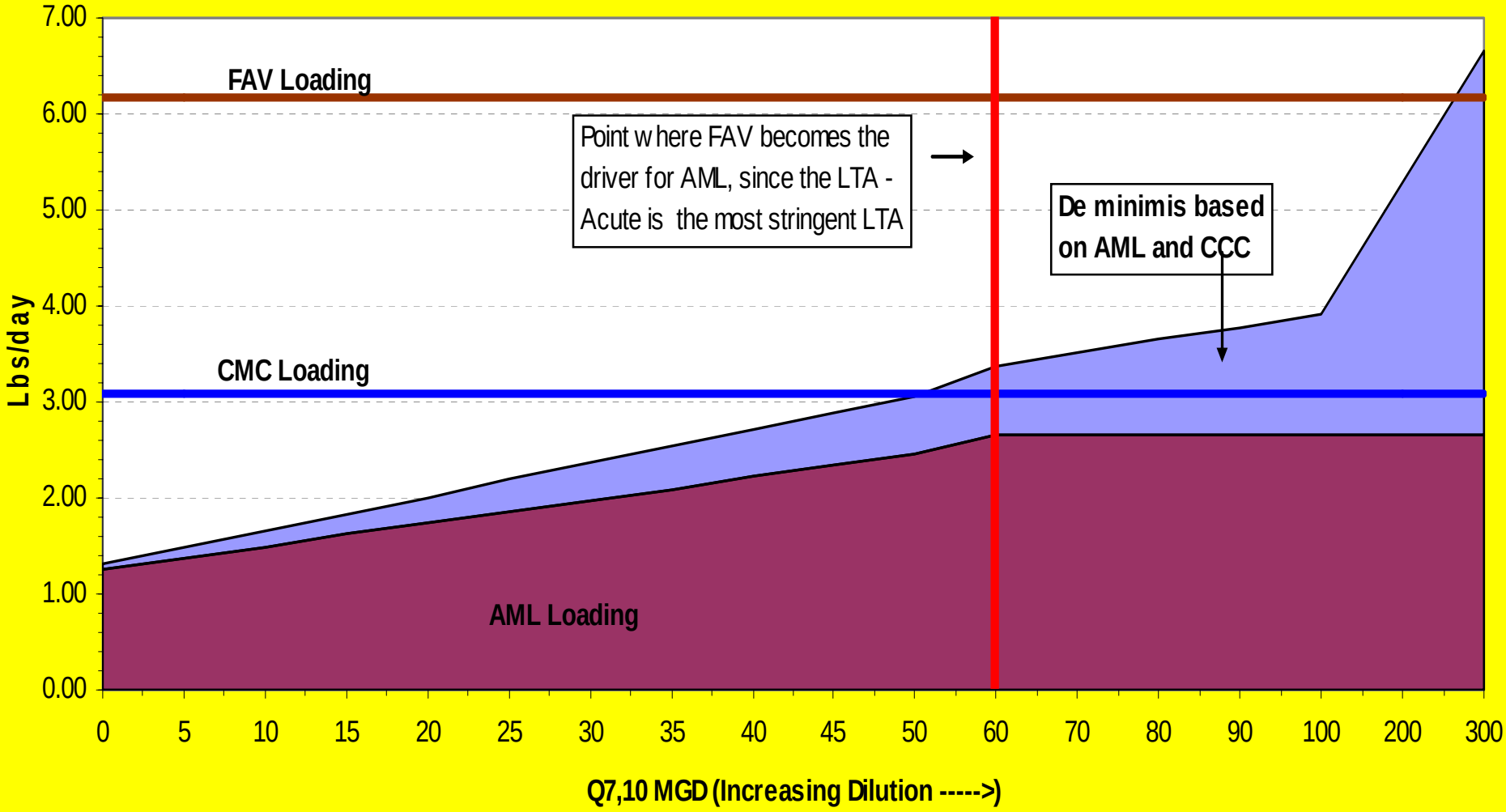
Assignment 5

CHART 1: Effect of Stream Dilution on Copper WQBELs
Great Lakes Discharger: Mixing Zone 25%, Effluent Design Flow = 10 MGD



Assignment 5

CHART 2: Maximum *de minimis* Loading for Copper for Various Stream Flows
Based on the Permit limits in CHART 1



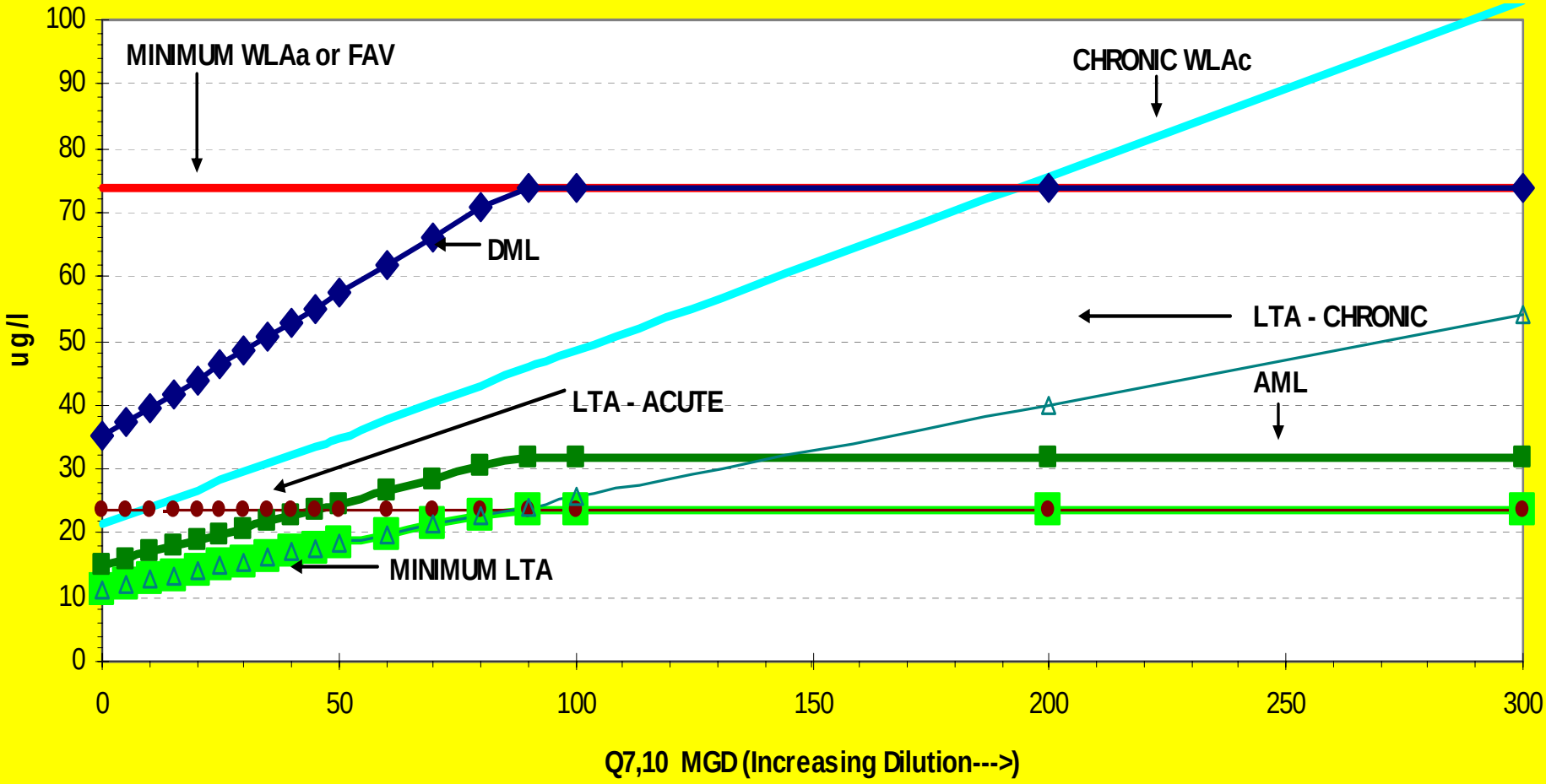
Assignment 5

(13)(B)(i)(AA) The proposed increase in mass-based effluent limits is less than or equal to the mass calculated using the new or increased flow and the water quality based effluent limitation (WQBEL) calculated without a mixing zone or the DTBEL, whichever is more stringent.

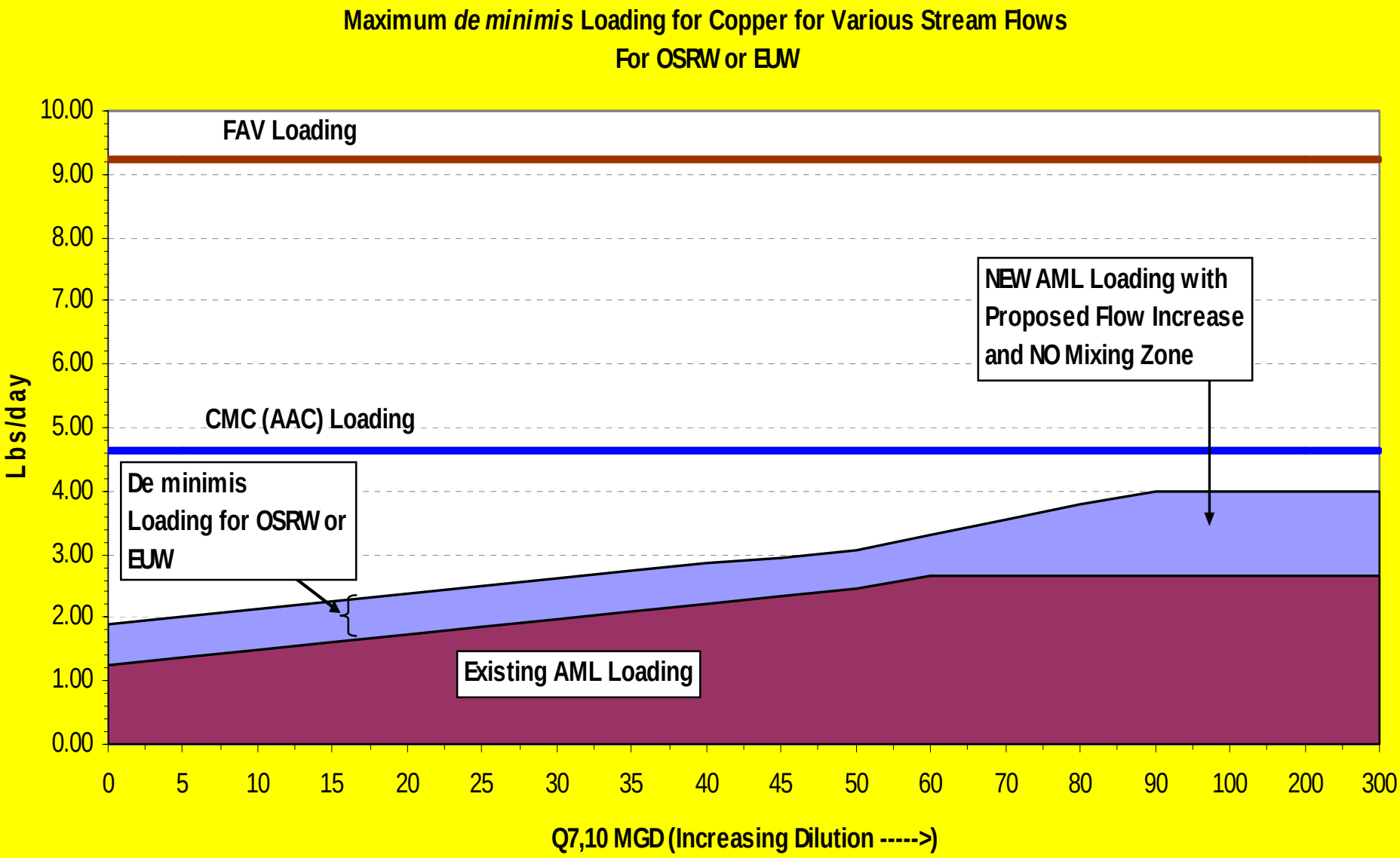
Municipal Stakeholders accept this language, if DTBEL examples can be demonstrated for municipal permits.

Assignment 5

CHART 1: Effect of Stream Dilution on Copper WQBELs for OSWR or EUW
Mixing Zone 0%, Proposed Effluent Design Flow = 15 MGD



Assignment 5



Assignment 5

(13)(B)(i)(BB) The unused loading capacity has not decreased by more that X percent (X%) above the benchmark set at the time of the initial antidegradation demonstration or de minimis evaluation in the area of the discharge.

Change to…

(13)(B)(i)(BB) The unused loading capacity has not decreased by more that **seventy-five percent (75%) of the** benchmark set at the time of the initial antidegradation demonstration or de minimis evaluation in the area of the discharge, **or at least twenty-five (25%) of the total loading capacity shall remain unused, whichever is more stringent.**

Assignment 5 - Recap

- For HQWs and HQW tributaries to OSRWs (or EUWs) 10% of the unused capacity is the correct percentage in determining a de minimis lowering of water quality.
- At least 10% of the total loading capacity benchmarked at the time of the first antidegradation demonstration or de minimis request shall remain unused.
- For HQW tributaries to OSRWs (or EUWs) no significant lowering of water quality in the OSRW (or EUW) shall occur.

Assignment 5 - Recap

- For OSRWs (or EUWs) the difference between the existing WQBEL and the WQBEL with the new or proposed flow and NO Mixing Zone is the correct value for de minimis increase in loading.
- At least 25% of the total loading capacity benchmarked at the time of the first antidegradation demonstration or de minimis request shall remain unused, or no more than 75% of the unused loading capacity shall be used, whichever is more stringent.

Assignment 5 - Recap

Is the final acute value (FAV the appropriate ceiling for de minimis discharge?

For HWQs (and HQW tributaries to OSRWs/EUWs) then the existing AML plus de minimis, expressed as mass, cannot exceed FAV at the discharge IF it is a zero flow stream or no mixing zone is allowed. Otherwise, the existing AML plus de minimis, expressed as mass, cannot exceed the CMC (AAC) at the edge of the zone of initial dilution (ZID) [by rules].

Assignment 5 - Recap

For OSRWs and EUWs, the de minimis is calculated as the difference between the AML mass limit using the new /proposed flow and NO mixing zone, and the existing AML mass limit. Both the FAV-based mass and the CMC (or AAC)-based mass is greater than the sum of the de minimis and existing mass. FAV acts only as a limiting factor in the calculation of the AML.

Assignment 5 - Recap

When calculating de minimis, should the effluent flow be included , adding to the receiving stream's loading capacity?

If the background concentration, used in the de minimis calculations, is immediately upstream of the discharge, then the used loading capacity (ULC) must be…

ULC=stream design flow X background conc. + effluent flow X existing AML, expressed as mass

If the background concentration, used in the de minimis calculations, is downstream of the discharge and any mixing zones, then the used loading capacity (ULC) must be…

ULC = background conc., X (effluent flow + stream design flow), expressed as mass

Assignment 5 - Comment

DTBELs – it is unclear how DTBELs will be applied to municipal permits for the de minimis calculations. It is also unclear what the value of the DTBEL, or basis for the calculation of the DTBEL, or what parameters, or under what treatment schemes the DTBELs are included in this process. Therefore, this vagueness needs to be resolved before municipalities can accept this alternative to the “traditional” de minimis calculation.